The Veliger 28(2):211–215 (October 1, 1985)

THE VELIGER

A Bibliography and List of Molluscan Names of Josiah Keep

by

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Abstract. A list of the books and papers by the early west coast malacologist Josiah Keep and a list of the 12 molluscan names that he introduced are presented. Two neotypes are designated.

Josiah Keep was an early malacologist on the west coast of the United States whose particular contribution was as a popularizer of the study of shells. The several editions of his *West Coast Shells* were responsible for recruiting the interest of many a student and amateur.

Josiah Keep was born in Paxton, Massachusetts, on May 11, 1849. He received a Bachelor's degree from Amherst College in 1874 and a Master's from the same institution in 1877. That year he also married and moved to California. There he taught at the Golden Gate Academy for one year, then Alameda High School for seven years, where he was principal from 1881 to 1885.

In 1885, he became Professor of Natural Sciences at Mills College in Oakland, California, with which he was associated for the rest of his life. He came to specialize in courses in geology and astronomy, but his real love was the Mollusca. Between 1881 and 1910 he published several editions of his handbook on the shells of the west coast (Keep, 1881, 1887d, 1888c, 1892, 1893, 1904, 1910b; 1935, posthumous edition by Keep & Baily). The interest that they elicited was one of the cornerstones of malacology in the western states.

He died in Pacific Grove, California, on July 27, 1911, where he is buried. (For more information on his life, see Anonymous, 1911; Dall, 1911a, b.)

Here I present what is intended to be a complete bibliography of his papers on the Mollusca. In addition, careful examination of the 1887 edition of *West Coast Shells* reveals that he inadvertently introduced several Carpenter manuscript names, some of which have escaped previous detection. These probably got onto collection labels in California through identified specimens returned by Philip Carpenter to Henry Hemphill, another early west coast collector. As evidence of this, there are three lots identified by Carpenter in the California Academy of Sciences from the Hemphill collection with three of these manuscript names on them. This material is cited below, but there is no evidence that Keep ever saw these particular lots. In each case, Keep probably had specimens in his own collection labeled with these names. In addition, Keep introduced three Hemphill manuscript names.

After his death, Keep's personal collection was sold by his family to the Institute of Geology & Paleontology of Tohoku University in Sendai, Japan, in 1915, where it is housed today.[1] The collection has some 3000 lots that belonged to him. The larger portion of the separate Mills College Collection went to the Department of Paleontology at the University of California at Berkeley. A smaller part went to the Department of Invertebrate Zoology at the California Academy of Sciences. I have examined these last two collections, as well as spot-checked the collection of the United States National Museum of Natural History, where Keep sent some specimens. Aside from the already isolated syntype of *Alvania aequisculpta* in the NMNH, I could not find Keep type material in any of them. Drs. Tamio Kotaka and Kenshiro Ogasawara of the Institute of Geology & Paleontology at Tohoku University have thus far been unsuccessful in finding type specimens of these 12 taxa in the Keep collection there.

Class Bivalvia

marginata, Crassatella—Keep 1887d:179, *ex* Carpenter MS. No locality given.

Type material—USNM 15578, neotype (Coan, 1984:

[1] Some workers were evidently misled into believing that Keep's collection went to Tokyo and was lost during World War II (for example, A. G. Smith, in Anonymous, 1968).

233), the same specimen that is the lectotype of *Psephis salmonea* CARPENTER, 1864:539; 611; 641. San Diego, San Diego Co., Calif.

Remarks—A synonym of *Halodakra* (*Stohleria*) *salmonea* (Carpenter, 1864). There is a specimen identified by Carpenter with this name on it from the Hemphill collection in the California Academy of Sciences (CASIZ 036681), but there is no evidence that Keep ever saw it.

Class Gastropoda

aequisculpta, Alvania—KEEP, 1887d:65, *ex* Carpenter MS. No locality given.

Type material—USNM 219564, syntype. San Diego, San Diego Co., Calif.; "on mossy rocks at low tide"; H. Hemphill; sent to the USNM by Keep in 1910. According to a letter from Bartsch to Keep (16 Aug. 1910) in the Archives at Mills College, four additional specimens were returned to Keep. The USNM syntype was figured by BARTSCH (1911:358–359; 362; pl. 32, fig. 7).

Remarks—*Manzonia* (*Alvinia*) *aequisculpta* (Keep, 1887, *ex* Carpenter MS), according to PONDER (1985: 48; 150, figs. 101G–I).

castanea, Chemnitzia—KEEP, 1887d:52; fig. 33, *ex* Carpenter MS. No locality given.

Type material—Not located. DALL & BARTSCH (1909:101) say that they borrowed the "types" from Keep, but BARTSCH (1912:322) later claimed to have examined only a single specimen. In any event, the type lot came from San Diego, San Diego Co., Calif.

Remarks—*Turbonilla* (*Pyrgiscus*) *castanea* (Keep, 1887, *ex* Carpenter MS), according to PALMER (1958: 252). Figured by DALL & BARTSCH (1909:pl. 9, figs. 1, 1a), a specimen from San Pedro, Los Angeles Co., Calif. If workers become worried by the brevity of Keep's description, a neotype could be designated.

A lot of four specimens from the Hemphill collection is in the California Academy of Sciences with this name on it identified by Carpenter (CASIZ 049331), but there is no evidence that Keep ever saw it.

Coincidentally, DALL & BARTSCH (1907:509–510; 534; pl. 47, fig. 7) named a different and new species *Turbonilla* (*Pyrgiscus*) *castanea,* and DALL (1908:131) renamed it *T.* (*P.*) *castanella* because of its homonymy with Keep's taxon.

columbiana, Fluminicola nuttalliana var.—KEEP 1887d:63, *ex* Hemphill MS. Rivers of Oregon and Washington.

Type material—Not located.

Remarks—Should apparently be *Lithoglyphus columbianus* (Keep, 1887), according to TAYLOR (1975:60), or *Fluminicola columbiana* Keep, 1887, according to BURCH (1982:22; 93, fig. 145). It has often been dated from PILSBRY, 1899:121; 123; 125.

columbiana, Physella—KEEP, 1887d:120, *ex* Hemphill MS. Columbia River, Oregon/Washington.

Type material—Not located.

Remarks—Should evidently be *Physella columbiana* Keep, 1887, according to BURCH (1982:53; 159, fig. 639). It has often been dated from HEMPHILL (1890: 27), and it was misspelled as *Physella "columbella"* by KEEP (1904:152).

graciliente, Evalea—KEEP, 1887d:52–53, *ex* Carpenter MS. No locality given; presumably California.

Type material—Not located. **Neotype** (herein), USNM 842108, designated from USNM 46152. Bahia Todos Santos, Baja California Norte. Figured by DALL & BARTSCH (1909:pl. 18, figs. 7, 7a).

Remarks—Should apparently be *Odostomia* (*Chrysallida*) *gracilientis* (Keep, 1887, *ex* Carpenter MS). (Since *Odostomia* is treated as a feminine noun, an *-is* ending would be appropriate.) It is **not** a secondary homonym of *O. interstincta gracilenta* MONTEROSATO, 1878:93; Keep's species has an "*-ie*" in the stem, whereas Monterosato's has only an "*-e,*" and the two adjectives are placed into different termination groups (ICZN Code Art. 57e, f). However, DALL & BARTSCH (1909:160–161; 243; pl. 18, figs. 7, 7a) named *O.* (*C.*) *virginalis* as a replacement name for Keep's taxon. They thought the two names were homonyms, misspelling both as *gracilienta.* (They incorrectly dated Monterosato's taxon as 1884.) They also inappropriately selected a type for their taxon which, as a replacement name, should retain the same type specimen as the replaced homonym.

Although Keep's taxon is virtually a *nomen dubium* because of its scanty description, Dall & Bartsch have essentially given it status. I think that the most nomenclaturally stable solution is to make their "type" of *O. virginalis* the neotype of Keep's *Evalea graciliente*; this then simultaneously makes it the neotype of Dall & Bartsch's unnecessary replacement name.

insculpta, Oscilla—KEEP, 1887d:52, *ex* Carpenter MS. No locality given, but presumably southern California.

Type material—Not located. **Neotype** (herein), USNM 106501. Punta Abreojos, Baja California Norte. Figured by DALL & BARTSCH (1909:pl. 20, figs. 8, 8a).

Remarks—A secondary homonym of *Odostomia insculpta* DE KAY, 1844:115–116; 263; pl. 31, fig. 297. DALL & BARTSCH (1909:183; 244; pl. 20, figs. 8, 8a) proposed *O.* (*Iolaea*) *eucosmia* expressly as a replacement name, but they inappropriately designated a "type" for their taxon.

As with the preceding, the most nomenclaturally stable solution is to make their "type" a neotype of Keep's taxon, which in turn makes it a neotype of theirs. The correct name for the species is *Odostomia* (*Iolaea*) *eucosmia* Dall & Bartsch, 1909.

interclathrata, Clathurella—KEEP, 1887d:65, *ex* Carpenter MS. No locality given, but presumably California.

Type material—Not located.

Remarks—Because this has not been cited since its first appearance and because of its ambiguous description, it should probably be regarded as a *nomen dubium*.

subquadrata, Amphisphyra—KEEP, 1887d:125, *ex* Carpenter MS. No locality given, but presumably California.

Type material—Not located. There are three specimens in the California Academy of Sciences identified by Carpenter from the Hemphill collection (CASIZ 049330), but there is no evidence that Keep ever saw them.

Remarks—Workers on opisthobranchs may want to consider whether this should be regarded as the earliest name for *Diaphana californica* DALL, 1919:299.

tincta, Tegula gallina—KEEP, 1887d:84. No locality given, but presumably southern California.

Type material—Not located.

Remarks—A synonym of *Tegula gallina* (FORBES, 1852:271). This varietal name has sometimes been dated from PILSBRY, 1889:169–170, *ex* Hemphill MS. Keep probably also got the name from Hemphill, but he didn't credit it to him.

Class Polyplacophora

decoratus, Callistochiton—KEEP, 1887d:112, *ex* Carpenter MS. No locality given, but presumably southern California.

Type material—Not located.

Remarks—An overlooked introduction of this name, according to Ferreira (*in litt.*, 26 March 1984), which has generally been dated from PILSBRY, 1893:269–270. See also FERREIRA (1979:448–449).

fimbriatus, Callistochiton—KEEP, 1887d:112, *ex* Carpenter MS. No locality given, but presumably southern California.

Type material—Not located.

Remarks—An overlooked introduction of this name, making it a senior synonym of *Callistochiton crassicostatus* PILSBRY, 1893:264–265, according to Ferreira, *in litt.*, 26 March 1984. See also FERREIRA (1979:447–448). This name is not preoccupied by *Chiton fimbriatus* SOWERBY, 1840:293–294, a Peruvian chiton.

ACKNOWLEDGMENTS

I appreciated the help and advice of Barry Roth and James T. Carlton in the initial phases of this project. I would also like to thank the following individuals who provided information or commented on drafts of the manuscript: Antonio J. Ferreira, Paul Finnegan, Terrence Gosliner, Jane Ing, Tamio Kotaka, David Lindberg, James H. McLean, Kenshiro Ogasawara, Winston Ponder, and the late Joseph Rosewater.

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